BULLETIN

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Electric Railroaders Association

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Back Issues
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In This Issue

Trip Notices/Save the Dates

April 15-19, 2026: Motor Bus Society spring San Francisco Bay Area convention.
April 29-May 13, 2026: ERA International trip to Northern England, Scotland and Isle of Man. Visit https://erausa.org/international-tours/2026/ for all the details.
August 28-September 2, 2026: ERA National Convention in Chicagoland. Potential activities include visits to region's famous museums, e.g., Illinois Railway Museum, Fox River Trolley Museum, East Troy Railroad Museum, the heritage operation in Kenosha, Wis., the downtown Milwaukee streetcar, and last but not least, a trip on Chicago Transit Authority's historic "L" fleet. This is ERA's first visit since 2011. More details will be forthcoming, so watch this space!

Donations

The ERA Board of Directors express their deepest appreciation for these member donations in November 2025.

$500 to $999

Edward McKernan

$200 to $499

Les Sugai

$100 to $199

Frederick Maloney, Guy Martin, John Swindler

$50 to $99

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Monthly Zoom Meeting

Friday, December 19, at 7:30 p.m.

Presenting This Month: Andrew Grahl

Andrew's holiday program includes his annual update of current events and heritage photos from all over North America. The program includes Metro-North, Long Island Rail Road, NJ Transit heritage units, San Francisco, San Jose, Sacramento, Phoenix, Boston, Philadelphia and Toronto. Vintage Kodachrome scans of traction and railroad subjects will be shown as well.

How to Join Our Zoom Meeting

The Zoom registration link for this meeting is: https://us02web.zoom.us/meeting/register/Ro-FIpQ9T-eQZ75CPyI93w. You can sign in at 7:15 p.m. The show begins at 7:30 p.m. If you have any problems, email Bob Newhouser at bnnyc1955@gmail.com, or on the night of the meeting, text or call Bob at 917-482-4235.

Front Cover Photo

On the evening of November 29, Metro-North Railroad's "electric" Holiday Lights Train was caught northbound at the Irvington Station on the Hudson Line. M8 No. 9260 (Kawasaki Rail Car, 12/2012) led the eight-car consist (9260-9261+9204-9205+9248-9249+9230-9231) of Train No. 777 (Grand Central to Croton-Harmon).
Brandon Elliott photo

Rear Cover Photo

Southeastern Pennsylvania Transportation Authority (SEPTA) Silverliner IV No. 444-443 (General Electric/Avco, 1976) is approaching Fortuna Station, in Hatfield Township on the Doylestown Branch, on Sunday, November 2, a beautiful Fall day. SEPTA was still suffering from a car shortage brought on by required inspections and repairs to its entire Silverliner IV fleet, hence the two-car train. This particular pair were originally delivered to the Reading Company as Nos. 104-103. Noah Caplin photo

Worldwide Suburban Electric Railway, Metro and Tramway Openings in November 2025

Date	Country	City	Segment	Distance (miles)	Railway/ Metro/ Tram
11/1	China	Shanghai	Line 2: National Exhibition and Convention Center to Panxiang Road	1.1	M
11/10	Italy	Naples	Line 7: Soccavo to Monte Sant'Angelo	?	R
11/15	France	Strasbourg	Line F: Comtes to Wolfisheim Henri Rendu	2.5	T
11/17	Canada	Montreal	REM Line A4: Gare Centrale to Deux-Montagnes	18.5	M
11/28	China	Dongguan	Line 1: Dongguanxi Railway Station to Meitang (New line)	35.7	M
11/29	Austria	Graz	Lines 16/17: Roseggerhaus to Jakominiplatz	0.7	T
11/30	Australia	Melbourne	Metro Tunnel: South Kensington to Hawksburn (Limited service to 2/1/2026)	5.6	R

URBAN RAIL NEWS, NOVEMBER 30

Rail News in Review

New York Metropolitan Area

METROPOLITAN TRANSPORTATION AUTHORITY (MTA)

Balanced Budget for 2026

The MTA released its final 2026 operating budget and four-year financial plan, introducing a new round of operating efficiencies over the next four years that significantly reduce out-year deficits announced in the July Financial Plan by a total of $418 million. New cost savings of $675 million are the primary driver of this achievement and raises the cumulative total to more than $2 billion in operating savings through 2029.

The plan shows a continued balanced operating budget for 2026 and reduces the projected deficit for 2027 by approximately half, from $345 million to $160 million, with additional deficit reductions in 2028 and 2029 thanks to a new round of operating efficiencies that the Authority has identified. The plan forecasts $75 million more in operating efficiencies for 2027; $150 million for 2027; $200 million for 2028; and $250 million for 2029, totaling $675 million in new cost savings. This is in addition to the annual recurring savings of $500 million the Authority is on track to achieve this year, originally reflected in the November Financial Plan of 2022.

The MTA has identified new cost savings through a variety of improvements, including savings achieved from transitioning to Tap and Ride, lower maintenance costs with the rolling deployment of newer and more reliable subway and rail cars, optimization of railroad train crew schedules and other identified efficiencies of internal processes across all agencies. These changes improve MTA operations and set up the Authority for long-term savings.

Overall, revenue and expenses are on budget for 2025. Farebox revenue is tracking to budget, primarily driven by stronger farebox performance from the commuter railroads, and overall operating expenses remain below budget.
MTA PRESS RELEASE, November 19

NEW YORK CITY TRANSIT (NYCT)

Platform Edge Barrier Update

Work to install platform edge barriers continued during November. During the hours of installation, which varied last month, trains bypassed the station while the work was underway.

- November 6-7 (12:01-5 a.m.), 149th Street-3rd Avenue 2 5
- November 8 (12 a.m.-12 p.m.), Utica Avenue s/b exp. 3 4
- November 14 (12 a.m.-12 p.m.), Utica Avenue n/b exp. 3 4

Another Former Tower is Demolished

Over the weekends of November 1-2 and 8-9, crews began the demolition of the former interlocking tower north of

East 177th Street-Parkchester on the IRT Pelham Line. This structure had been unused as a tower since August 15, 1998.

During the work, southbound 6 trains operated express via Track M from south of Pelham Bay Park to north of Hunts Point Avenue.

New Signals at 34th Street-8th Avenue (Cont.)

The cutting in of the new signal system south of 34th Street on the IND Eighth Avenue Line continued in November. The next three phases took place on the following dates:

- 11/7-14: North end of middle Track A5
- 11/15-17: Southbound express Track A3
- 11/22-24: Northbound express Track A4

As was done at 42nd Street Interlocking, 34th Street is controlled from 59th Street Master Tower.

Subway Schedule Changes

The new Fall pick went into effect on Sunday, November 2, Monday, November 3 and Saturday, November 8. The most noteworthy changes occurred on the A and L Lines.

On the A, there is increased service during weekday middays by adding one round trip each to Lefferts Boulevard and Far Rockaway, which extends the span of midday 8-minute average headways between 207th Street and Rockaway Boulevard.

On the L, additional trips are provided in the a.m. rush. Weekday evening rush and weekend schedules were revised to better align service frequency with ridership. Weekday a.m. peak period service increased by four additional round trips total, with two additional trains at the height of the a.m. peak to increase service from 20 to 22 trains between approximately 8:00 a.m. and 9:00 a.m. This increase in capacity is enabled by recent upgrades to the line's traction power system, including three new substations.

In the weekday p.m. peak period, the span of 4-minute headways begins approximately 30 minutes earlier.

On Saturdays, trips were adjusted in the early morning and late evening hours, extending the span of 8-minute headways through the 11:00 p.m. hour. On Sundays, the span of peak 4-minute service starts two hours earlier, with service reaching the 4-minute headway in the 11:00 a.m. hour.

There were minor run time changes on most of the IND lines. One operational change that occurred on the IND involved the G Line. Previously, G train crews would relay their trains at Church Avenue upon arrival. With the new pick, they are now relaying on departure. In other words, southbound G trains arrive at Church Avenue and the arriving train operator detrains. The new train operator boards and takes the train to the relay position south of the station. After changing ends, this train operator then takes the train back into Church Avenue and continues on the trip north to Court Square.

In the September *ERA Bulletin* (see page 5) there was a news item about a Sea Beach Line service improvement. This referred to two N and one R post-a.m. rush trains that were rerouted off the Sea Beach Line (they had gone out of service at 86th Street to be laid up) and onto the West End Line. This change was made permanent and is now in the base timetable.

On the IRT, there was one slight change that did occur and one change that, at least temporarily, has not yet occurred.

What did change were the three PM Parkchester lay-ups that now operate via express Track M from Hunts Point Avenue to Parkchester. These three lay-ups operate after the regular Pelham Express 6 service ends.

What did not occur was the resumption of "two-pocket" operation at 148th Street-Lenox Terminal (see *Lenox Terminal Work Continues* on the next page). When the Lenox Terminal ADA work started back on February 1, the 3 operated under a supplementary timetable that provided a "single-pocket" operation there. When the Spring pick started back in June, the base 3 timetable included that single-pocket operation. The ADA work was expected to be completed by the time of the Fall pick, or shortly thereafter. So, the 3 has, once again, been operating under a supplementary timetable until that ADA work finishes up.

MTA Press Release, November 3

Railcar Acceptance and Testing Facility Opens

A ribbon-cutting ceremony was held for the opening of the first-of its-kind Railcar Acceptance and Testing Facility. Delivered on time and under budget, this state-of-the-art complex serves as the first stop for all new subway cars before they are put into service. This facility will help to process new subway cars, work locomotives and other rolling stock more efficiently, helping complete onsite testing so they can enter service more quickly.

Inside the new facility on opening day, November 21.
Marc A. Hermann/MTA photo

Located on the South Brooklyn Railway between Third and Fourth Avenues in Sunset Park, the facility can accept rolling stock delivered by truck, rail, or barge. Once accepted, individual cars will be linked together for testing and commissioning on the facility's in-house tracks. The newly created trains will then be sent via the facility's direct connection to the subway network to complete further testing and will be entered into revenue service once they pass final inspection. This is the first brand-new subway car facility that the Authority has added since the Pitkin Yard

opened in Brooklyn in 1948.
MTA PRESS RELEASE, November 21

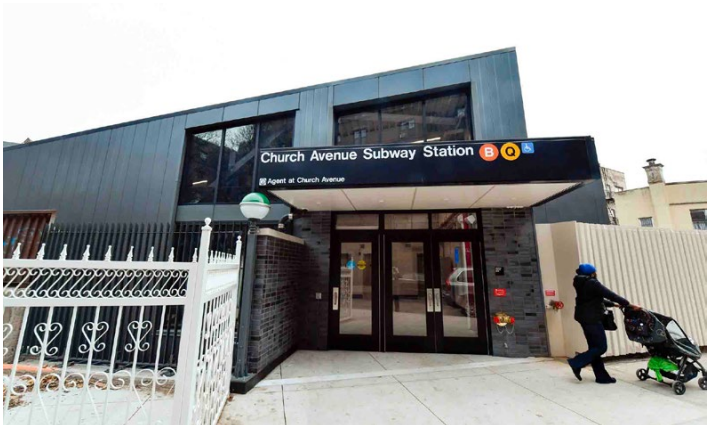
Unused Tower Demolition Continues

In the October *ERA Bulletin* (see page 5) we mentioned the demolition of the former Alburtis Avenue (103rd Street) Tower on the IRT Flushing 7 Line. All that was accomplished on that occasion was the removal of the roof structure. Crews went back to the location over the weekend of November 29-30 to resume the demolition.

The remains of the tower as seen on October 16, with only most of the roof removed. Jeff Erlitz photo

Church Avenue B Q ADA Project

The MTA announced the completion of station and accessibility upgrades at the Church Avenue B Q Station on the Brighton Line. Upgrades include a new entrance (that replaced a long-closed exit-only headhouse) mid-block on East 18th Street, complete with two new street to platform elevators, two new stairways, a new fare array, and a new transfer bridge with a customer information screen. In addition to the new elevators, crews made accessibility upgrades to the platform edge to install new boarding areas and tactile edge strips.



The new entrance is on the east side of East 18th Street, about 300 feet north of Church Avenue. This fare control area had previously been exit-only and much smaller. Marc A. Hermann/MTA photo

Throughout the station, crews upgraded communications and electrical systems and performed state of good repair work on structural steel and concrete. New mosaic tile artwork will be unveiled at the station in early 2026.

Approximately 30% of the project budget was awarded to Disadvantaged Business Enterprise firms. The design-build team for the station upgrades includes Urbahn Architects, Dewberry, Forte Construction and EAE Halmar International, and the elevator manufacturer and installer is Otis Elevator.
MTA PRESS RELEASE, November 25

Lenox Terminal Work Continues

Track 1 at 148th Street-Lenox Terminal 3 has been out of service since February 1 for ADA work. It was scheduled to return to service on Monday, December 1. However, the work has now been extended to, at least, the end of this year.

LONG ISLAND RAIL ROAD (LIRR)

Main Line Disrupted for One Weekend

Over the weekend of November 8-9, there was no service on the Main Line between Mineola and Farmingdale. This was to allow crews to perform a signal upgrade.

Buses were provided for service between Mineola and Huntington but they did not stop at Carle Place or Westbury. Passengers were instructed to use NICE bus service for those two stations. Railroad tickets were accepted on the buses.

For service to Ronkonkoma, "Z" trains were operated between Jamaica and Ronkonkoma via Babylon and Bethpage Junction. No stops were made between Jamaica and Farmingdale.
MTA PRESS RELEASE, November 7

St. Albans Station Upgrade Completed

The completion of station and accessibility upgrades at St. Albans Station on the Montauk Branch was announced on November 13. Upgrades included a new street to platform elevator, new communication and security systems and parking lot accessibility improvements.

Crews also reconstructed the tunnel to provide required height clearances, installed a new elevator machine room, installed concrete sidewalks, new guardrails and treads at staircases, two new weatherproof Help Point emergency and information kiosks, new station signage and LED lighting and CCTV security cameras. The St. Albans station serves more than 1,000 daily riders.

The project, which is part of LIRR ADA Package 1, was made possible by support from the Federal Transit Administration. The project is a joint venture between Citnalta/Scalamandre and Parsons Transportation Group.

Meanwhile, a modernized elevator serving the Auburndale station, as part of larger accessibility and safety upgrades, opened to the public.

In addition to replacing the existing elevator and refurbishing the elevator machine room, crews upgraded the electrical service, made plaza enhancements including additional elevator signage, and installed new handrails at

both staircases and guardrails and end-of-platform railings and new CCTV cameras.
MTA Press Release, November 13

METRO-NORTH RAILROAD (MNR)

Eighth Wrapped Locomotive Released

MNR has wrapped an eighth locomotive with special colors and designs as part of its Heritage Series that highlights the railroad's 42 years of service to the public. The wrap applied to P32AC-DM No. 216 honors the service and sacrifice of the nation's veterans and was developed with direct input from MNR's veteran workforce. A ceremony was held on November 10 at North White Plains to unveil the unit.

P32AC-DM No. 216, resplendent in its new scheme, at North White Plains on November 10. Marc A. Hermann/MTA photo

The process began with a system-wide survey of all veteran employees to gather ideas and perspectives, followed by the formation of a 12-member committee of veterans who selected the final concept. The resulting design pays tribute to every branch of the U.S. Armed Forces and features military uniform patches. All decals on the locomotive, including the MTA and MNR logos, the locomotive numbers, and the Heritage Fleet emblem, have been re-imagined as embroidered uniform patches. The front of the locomotive is wrapped in a fabric-textured design resembling an American flag with detailed stars, while each side displays silhouettes of iconic military equipment such as the Navy's transport dock ship USS New York, a Coast Guard Cutter, a Marine Corps Super Stallion, and an Army Blackhawk helicopter.
MTA Press Release, November 10

Holiday Lights Trains

Holiday Lights Trains welcomed the season starting Friday, November 28, and will operate through New Year's. The Holiday Lights Trains will be festooned with colorful exterior lights and special holiday-themed safety messages will play at selected stations.

MNR's dual-mode powered Holiday Lights Train, seen at Harmon on November 21. Emily Moser/MTA photo

Building on last year's wildly popular Holiday Lights Train, MNR will spread double the cheer by adding a dual-mode train for the first time, bringing holiday lights to every part of MNR's East of Hudson territory. The LIRR Holiday Lights Train, a first for the LIRR, will operate along all electric branches. Both railroads will operate on a random rotation of regularly scheduled trains all times of day and night.
MTA Press Release, November 25

NJ TRANSIT (NJT)

Mahwah Station Renovation

NJT has completed the exterior renovations at Mahwah Station, marking another important milestone in the commitment to preserve critical transportation assets. The Mahwah renovation project is modernizing and enhancing the station with safety and aesthetic upgrades that improve both functionality and structural integrity.

View of the Mahwah station building. NJ Transit photo

Elements of the project that have been completed include the replacement of the station roof, retaining wall, and a stairway, along with the installation of new architectural

railings and the relocation of electrical equipment. Additional upgrades included improved site drainage, a new concrete apron, refreshed landscaping and new bike racks.

Additional exterior improvements included partial stucco and brick repairs, minor lighting upgrades, refurbished stairs and the installation of upgraded information displays.
NJ TRANSIT PRESS RELEASE, November 3

Current Multilevel Fleet To Be Overhauled

NJT's Board of Directors authorized $917 million to overhaul its existing fleet of 429 Multilevel railcars. The Multilevel I and II cars, which are approaching 20 years of service, are due for their recommended mid-life overhaul. Additionally, as NJT is currently in the process of procuring new third-generation Multilevel vehicles, the overhaul will ensure compatibility and interoperability with these new Multilevel III vehicles.

The NJT Board of Directors authorized funding not to exceed $917,058,512.41, plus 10% for contingencies to overhaul its fleet of 329 first generation Multilevel I vehicles, delivered between 2006-2009, and 100 Multilevel II vehicles, delivered between 2012-2013.

An Expression of Interest (EOI) process will be used to identify qualified rail vehicle overhaul contractors with proven experience in large-scale commuter railcar mid-life overhaul programs. The EOI process will invite contractors to submit their qualifications, capabilities, and relevant project experience. Based on the evaluation of EOIs received, NJT will develop a list of contractors that will be invited to participate in the final procurement and contract award stage.
NJ TRANSIT PRESS RELEASE, November 12

Hudson-Bergen Extension into Bergen County

NJT is advancing an extension of the Hudson-Bergen Light Rail into Bergen County by issuing a Request For Proposals to hire a contractor to prepare the Draft Environmental Impact Statement. The proposed 10-mile extension would provide light rail service from the current terminus at Tonnelle Avenue in North Bergen up to a currently anticipated terminal at Englewood Hospital.

The Northern Branch project (formerly Erie Lackawanna Railway, originally Erie Railroad), as currently proposed, will extend the Hudson-Bergen Light Rail system by 10 miles and include seven new station stops in five municipalities. The service would operate on West Side Avenue in North Bergen, and then on existing railroad right-of-way owned by CSX Transportation between 91st Street in North Bergen and the northern border of Englewood and would introduce new station stops in North Bergen, Ridgefield, Palisades Park, Leonia, and Englewood.

In 2023, the Federal Transit Administration rescinded its Notice of Intent to consider NJT's previously submitted environmental impact statement citing changes in environmental conditions such as flood plains, storm water management and air quality which have occurred since 2007. NJT determined the scope of work required to update the environmental impact statement would require a new contract. At that time, work began to assess and prepare the requirements included in the current RFP.
NJ TRANSIT PRESS RELEASE, November 14

LRV No. 2029 (Kinkisharyo, 1999) is seen laying over between runs at the current north end of the line, Tonnelle Avenue in North Bergen, on February 25, 2012. Jeff Erlitz photo

PORT AUTHORITY TRANS-HUDSON (PATH)

Service Increases in 2026

Following the substantial completion of major work associated with PATH Forward (see https://www.panynj.gov/path/en/path-forward.html), the Port Authority has proposed service increases that would be implemented in phases starting in March 2026. Additional service enhancements are scheduled for May 2026 and March 2027.

These service changes include:

March 2026

- Journal Square-33rd Street via Hoboken will double on weekends between 10 a.m. and 9 p.m., with trains every 10 minutes instead of every 20 minutes
- Hoboken-World Trade Center frequency will improve from eight minutes to six minutes during morning rush hour

May 2026

- Dedicated Hoboken service to World Trade Center and 33rd Street will resume on weekends for the first time since 2001. Journal Square-33rd Street and Hoboken-33rd Street will operate every 10 minutes and Hoboken-WTC will operate every 20 minutes from 10 a.m. to 9 p.m.
- Enhanced late-night Friday service, with trains every 20 minutes instead of every 40 minutes between 11:30 p.m. Friday and 2 a.m. Saturday on all lines

March 2027

- Newark-World Trade Center frequency will improve from every five to every four minutes during morning and evening rush hours
- Increased weekend service on Newark-World Trade Center

and Hoboken-World Trade Center from 10 a.m. to 9 p.m., with trains running every 10-15 minutes instead of every 20 minutes

In order to run direct service on the weekends and allow for adequate maintenance schedules, the Journal Square-33rd Street via Hoboken service that currently starts at 11 p.m. on Monday to Friday nights, will start at 10 p.m. beginning in Fall 2026.

PORT AUTHORITY PRESS RELEASE, November 13

Other U.S. Systems

PHILADELPHIA, PA.

Silverliner IV Fleet Progress

SEPTA has completed the point-by-point inspections of its Silverliner IV Regional Rail trains ahead of the November 14 deadline set by the Federal Railroad Administration (FRA).

The FRA outlined 14 safety-related requirements in an Emergency Order issued on October 1 in response to recent fires involving the Silverliner IV fleet. SEPTA met almost all of the required actions by the FRA's initial October 31 deadline. The FRA granted SEPTA an extension to finish enhanced inspections of the 223 railcars and install new high-heat detectors. SEPTA will meet the new deadline of December 5 to install the thermal protection circuits. The circuits are a safety mechanism designed to interrupt the flow of electricity to an overheating device.

Train No. 6317 (West Trenton-30th Street), with Silverliner V cars Nos. 721+734 (Hyundai-Rotem, 2010) is seen arriving at Neshaminy Falls on November 6. This was before the completion of the fleet inspections of the Silverliner IV cars, hence the extra-short train. Noah Caplin photo

Now that the inspections are completed, Regional Rail reliability should gradually improve through the end of the year as more railcars are repaired and returned to service.

Meanwhile, SEPTA has signed an agreement with the Maryland Area Regional Commuter Rail system to lease 10 rail cars, which will help provide some relief to riders in the coming weeks. *(Editor's note: See the rear cover of this issue for a recent view of one of SEPTA's short, two-car Regional Rail trains.)*

SEPTA NEWS, November 14

PITTSBURGH, PA.

Mt. Washington Transit Tunnel

The Mt. Washington Transit Tunnel is expected to reopen by the end of 2025, Pittsburgh Regional Transit (PRT) announced. The tunnel has been closed since February to allow crews to replace the tracks inside the tunnel and perform other infrastructure upgrades.

The project had been expected to be completed by the end of October, but a design issue required PRT's contractor to adjust the location of a newly-installed section of track, delaying the opening. Once that work is complete, PRT will test the tracks and train employees before reopening the tunnel.

Looking east on Arlington Avenue on December 2 after a moderate snowfall, LRV No. 4203, operating a Silver Line trip to Downtown, has just rounded the long curve at the east end of Allentown. Originally SD 400 No. 4103 (Siemens, 1985), this car was rebuilt by CAF in 2005. Devin Mooney photo

In the meantime, the Red, Blue, and Silver Lines will continue detouring through Allentown via Warrington and Arlington Avenues, the temporary "Subway Local" service will continue to operate between Station Square and Allegheny Station, and Station Square Station will remain part of the light rail free fare zone.

PRT NEWS RELEASE, November 20

PORTLAND, OR.

Final Type 6 Car Arrives

A new chapter in TriMet's light-rail story rolled off the back of a flatbed truck and onto the rails as the final Type 6 car arrived at the Ruby Junction Rail Operations Facility on November 20. The occasion marked a milestone in TriMet's largest MAX fleet upgrade in more than 20 years.

Before it begins carrying revenue passengers, the new vehicle will undergo weeks of testing, including logging at least 3,000 miles not in revenue service.

The last Type 6 car is offloaded at the Ruby Junction Rail Operations Facility on November 20. TriMet photo

The final Type 6 brings TriMet's total to 30 new cars. The first Type 6 began service on January 16, 2025, and TriMet currently has 22 in service, accounting for approximately 15% of the total MAX fleet.
TRIMET NEWS, November 21

WASHINGTON, D.C. AREA

Final Purple Line Vehicle Delivered

The Maryland Department of Transportation/Maryland Transit Administration announced the arrival of the 28th and final light-rail vehicle to the state of Maryland for the new Purple Line. Arriving ahead of schedule, the vehicle delivery will allow the project team to comprehensively test the full alignment.

Aerial view of the Purple Line's Operations & Maintenance Facility. MDOT/MTA photo

The final vehicle delivery on November 19 completes the project's full order of 28 vehicles. At 142-feet long, the light rail vehicles are one of the longest in the United States, with capacity for 430 passengers and seating for 80. The LRVs can accommodate up to eight wheelchairs and have eight bike racks to support first- and last-mile connections. The Purple Line LRVs were built by CAF, a Spain-based railcar manufacturer, and assembled in Elmira, N.Y. Once delivered, each LRV undergoes an extensive commissioning and testing process.

The Purple Line is now 84.6% complete with more than 148,000 of 193,100 feet of track laid overall, bringing rail progress to 76.6%. All rail in Prince George's County is installed.
MDOT/MTA PRESS RELEASE, November 25

International

BILBAO, SPAIN

Metro Renewal Planned

Metro Bilbao is planning an investment program worth between €700 and €800 million, according to the Basque provincial government. The project marks the start of procuring a second generation fleet of 37 trains for the 30-year-old, 51-kilometer three-line network, as well as upgraded signaling and communications systems and progress on future Lines 4 and 5.

A technical specification document outlining the requirements for the new trains will be completed before the end of the year. This will allow Bizkaia Transport Consortium to launch the tender process, which is expected to be one of the largest metro fleet contracts in Spain. Metro Bilbao operates a fleet of 46 trains manufactured by CAF, 37 of which will be replaced under the renewal program.

UT500 No. 507 (CAF, 1995) at the north terminal, Plentzia, of Route L1 on June 23, 2023.
Matthias Oliver Scheidegger photo via Urban Electric Transit

The new trains will each consist of five cars, standardizing the fleet and increasing capacity by up to 15%. They will also be equipped with sensors capable of transmitting real-time data, enabling predictive maintenance and reducing energy consumption by 35%.

The investment program also involves introducing CBTC to modernize the network's signaling and control systems. The

operations control center will also be upgraded to manage the higher data and performance demands associated with the new system.

According to preliminary plans presented in 2024, the manufacturing schedule would allow for the delivery of around 12 trains per year, enabling all new trains to be delivered within five years of the contract award. The first new trains are therefore expected to enter service between 2027 and 2028, with the whole new fleet operational by 2033. INTERNATIONAL RAILWAY JOURNAL, November 6

BUDAPEST, HUNGARY

New EMUs for Suburban Network

Hungarian operator MAV Passenger has published a conditional call for tenders for a framework contract for 54 1.5kV dc low-floor 110-meter-long EMUs for the HEV suburban network around Budapest. The total value of the framework contract is estimated at Forints 326.5 billion ($US 983 million) and the 54 EMUs would have to be delivered within 96 months of signing the contract. However, MAV Passenger has not guaranteed to place an order, although it will need to purchase at least 18 EMUs for Line H5 to Szentendre.

MAV says that unused European Union (EU) money and funding from the Hungarian government are expected to finance the first 18 trains. These would all need to be in service by December 31, 2029 because the EU funds need to be allocated by then. The 54 EMUs would be sufficient to replace most of the current fleet (with several trains now over 50 years old) on the rest of the HEV network covering lines H6, H7, H8 and H9.

A renovated EMU, No. 1132 (LEW-Lokomotivbau-Elektrotechnische Werke, 1983) in Szentendre on October 30, 2016.
Christo photo via Wikipedia

The successful bidder will not only have to deliver the trains but also supply train drivers, maintenance staff, and a train driving simulator. A similar tender for 54 HEV trains (but with a maximum length of 120 meters) was issued in September 2020 but revoked in April 2021 due to lack of funds.

INTERNATIONAL RAILWAY JOURNAL, November 24

DENMARK

Talgo 230 Trains Enter Service

Danish State Railways (DSB) put its first Talgo 230 trains into service between Copenhagen and Hamburg on November 3, one month after they were authorized for operation in Germany and Denmark.

Initially, a single train pair, operated in conjunction with German Rail (DB), will run between the two countries. EC396 departs Hamburg at 10:.53 a.m., while in the opposite direction EC397 leaves Copenhagen at 2:11 p.m. Five trains currently run daily in each direction between the two cities and a sixth daily service is due to be introduced at the end of March. Eight out of 16 Talgo 230 trains, branded EuroCity by DSB, have already been delivered and these will be gradually phased in, replacing the existing fleet, with all six services expected to be operated using Talgo 230 trains by next spring. During the summer season, four additional trains per day in each direction will be offered seasonally, bringing the total to 10 daily return services between Hamburg and Copenhagen.

The first Talgo 230 train, EC396, is seen leaving Hamburg on November 3 led by Vectron No. 3225 (Siemens/Krauss-Maffei, 2021).
Volker Emersleben/DB AG photo

The 209-meter-long, 15-car trains will be hauled by DSB's fleet of 200km/h Siemens Vectron electric locomotives and will triple passenger capacity, offering 492 seats compared with 136 in the older fleet. In 2026-27, the Talgo 230 trains will be extended to 16 cars with the addition of a driving trailer, which will then enable the trains to operate in push-pull mode.
INTERNATIONAL RAILWAY JOURNAL, November 3

FRANCE

French Region Orders More Bi-Mode Trains

The Grand Est region of France has ordered 16 six-car Regiolis bi-mode trains from CAF for €235 million, which

by 2030 will replace push-pull sets hauled by Class BB 22200 locomotives on the Regional Metropolitan Express Service (Serm) that runs from Saverne to Strasbourg and Selestat.

The new trains will be 100 meters long and will each have total of 355 seats compared with 265 in the trains they will replace. Grand Est has recently spent €11.7 million on work to extend the service life of its existing fleet.

The region has ordered more bi-mode diesel and electric trains from CAF despite the Saverne-Strasbourg-Selestat line being entirely electrified. Grand Est has already purchased 15 identical Class B 83500 multiple-units, which as well as reducing the acquisition cost will enable a saving in maintenance costs of €130 million over 40 years.

One of Grand Est region's newest EMUs is this Class 83500, No. 559, seen at Strasbourg on February 24, 2020.
Kevin B. photo via Wikimedia Commons

The choice of bi-mode trains will also enable the new fleet to operate throughout the Grand Est regional network, rather than being confined to electrified lines. In addition, the CAF plant which undertakes Regiolis production is located at Reichshoffen in the Grand Est region.

CAF acquired Reichshoffen, the Coradia Polyvalent or Regiolis platform and its order backlog from Alstom in 2022. Divestment of the Coradia Polyvalent was a condition set by the European Commission when it approved the acquisition of Bombardier by Alstom in 2020.
INTERNATIONAL RAILWAY JOURNAL, November 21

LONDON, ENGLAND

New CAF Trains Withdrawn on DLR

Transport for London (TfL) temporarily withdrew three new CAF B23 trains from passenger service on the Docklands Light Railway (DLR) on November 12. TfL described the move as a precautionary measure, following an issue with braking performance on one train during wet weather.

An investigation was initiated on the same day to fully understand the cause and return the trains to service. Although TfL acknowledged that it was dealing with an isolated incident relating to a single train, it says that safety concerns led it to withdrawal all of the new trains.

Engineering teams from TfL, DLR operator KeolisAmey Docklands, and CAF will work together to understand and resolve the problem, which emerged when a train did not stop in the planned position at a platform because of low adhesion during wet weather. This is not an issue with the existing fleet.

B23 set at South Quay on July 2, 2023. Tom Page photo via Wikipedia

Service levels on the DLR will not be impacted by the temporary withdrawal of the new trains, which are the first of 54 trains that entered service last month under a phased program that was due to complete by the end of next year. TfL says a review will consider whether the overall schedule for the project will be affected by the adhesion issue.
INTERNATIONAL RAILWAY JOURNAL, November 12

MEXICO CITY, MEXICO

CBTC on Line 1

Siemens Mobility has completed the installation of CBTC on Line 1 in Mexico City, as part of a wider program to improve service quality, safety and operational performance on the oldest and busiest line on the metro network.

Opened in 1969, Line 1 runs for 18.6 kilometers from Pantitlan and Observatorio. The upgrade also includes the installation of a dedicated fiber-optic backbone to support digital communications as well as track renewals.

Siemens Mobility has supplied its Trainguard MT CBTC system for moving-block operation, enabling the minimum headway to be reduced to 100 seconds and delivering a 15% increase in line capacity and enabling Line 1 to carry 850,000 passengers a day. Metro operator STC expects shorter station dwell times, more even service intervals and a notable improvement in reliability once the system is fully operational.

An NM-22 entering the Boulevard Puerto Aereo station of Line 1 on April 8, 2024. Niiczence photo via Wikipedia

Onboard CBTC equipment has been installed on the new Line 1 fleet of 29 series NM-22 trains supplied by CRRC Zhuzhou as main contractor for the upgrade project, as well as 10 refurbished series NM-16 trains. As signaling subcontractor, Siemens Mobility will also maintain the new signaling and train control system under a 16-year service agreement.
INTERNATIONAL RAILWAY JOURNAL, November 26

MONTREAL, CANADA

Service to Deux-Montagnes Begins

The Deux-Montagnes branch began passenger service on the Reseau express metropolitain (REM) on November 17. Stretching from downtown Montreal to Deux-Montagnes, the new 18.6-mile extension adds 14 stations to the network, expanding REM service to nearly 30.1 miles and a total of 19 stations. The fully electric system now links the North and South shores to downtown Montreal, with stations on the West Island.

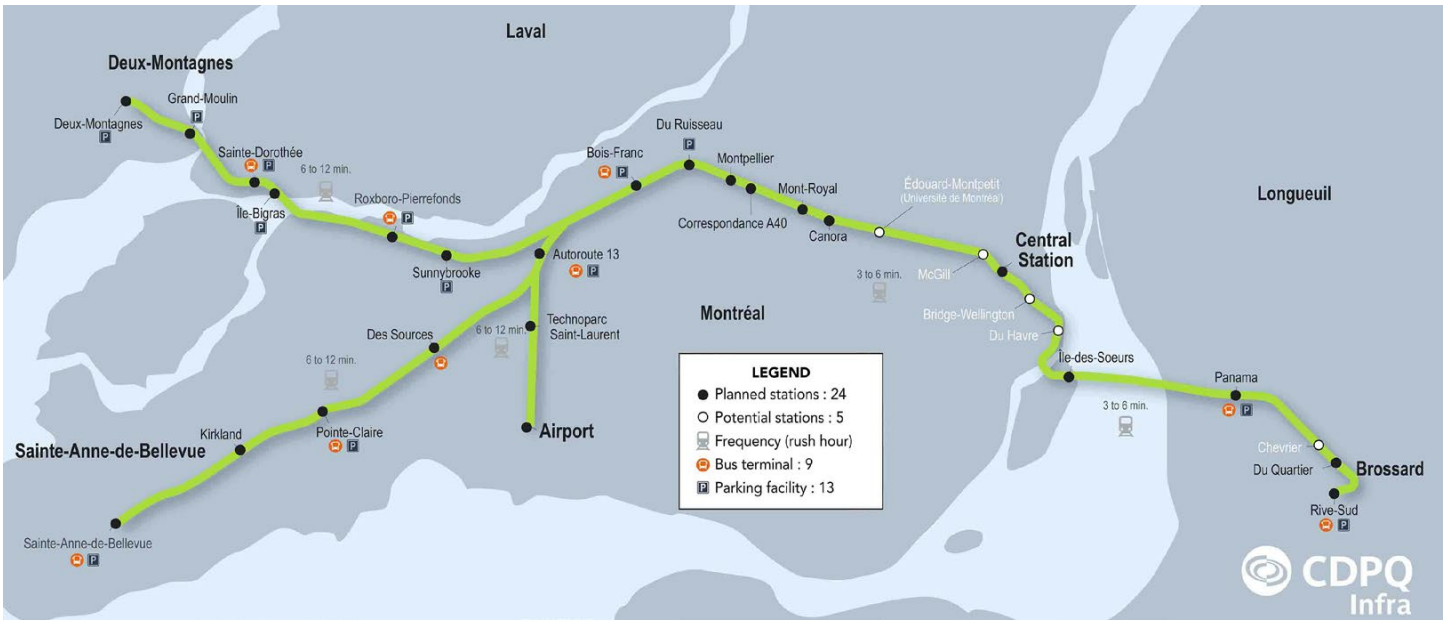
Once fully completed, the REM network will extend 41.6 miles across 26 stations, including from downtown Montreal to the international airport. It will accommodate up to 170,000 users per day, cut greenhouse gas emissions by 100,000 metric tons annually and make it possible to reach the airport from downtown by train in 25 minutes.

Alstom provided REM with a fully automated, driverless metro system, including rolling stock and signaling. The system includes:

- 212 Alstom Metropolis metro cars (106 two-car trainsets)
- Alstom's Urbalis GoA4 solution for driverless operation and Communications-Based Train Control
- The Urbalis Vision control center solution
- Platform screen doors
- Onboard Wi-Fi connectivity
- Cybersecurity

Alstom has also delivered equipment for two depots and two train washing facilities. REM maintenance teams use Alstom's HealthHub digital platform, a predictive maintenance tool that monitors the health of the train fleet and infrastructure in real time, leveraging artificial intelligence to analyze all data captured across the rail system.
MASS TRANSIT, November 18

(Below) Map of the REM network after the Sainte-Anne-de-Bellevue and Airport branches open. CDPQ Infra



NETHERLANDS

New EMUs Ordered

Netherlands Railways (NS) has signed a 10-year framework contract with Stadler Rail for a fleet of 160km/h Flirt Flex EMUs, based on the Flirt4 platform. The deal includes a base order of 36 trains, with a value of €400 million, comprising 18 four-car units and 18 six-car units, which are for operation solely within the Netherlands, operating at 1.5 kV dc.

The passenger capacity of a four-car Flex is 202 seats, of which 32 are in first class, plus 102 passengers standing. The

six-car variant offers 302 seats, of which 32 first class, plus 165 standing. NS says it will not disclose the total amount of trains that it might order under the framework. These include multi-system units that could operate cross-border services to Belgium and Germany.

One of NS's newest existing EMUs is this example, made up of two ICNG25 units, 3226+3133 (both Alstom, 2023). This is IC Direct Train No. 1057 (Rotterdam Centraal-Amsterdam Centraal) at Rotterdam Centraal on May 14, 2024. Jeff Erlitz photo

The contract, which was not disputed by an unspecified number of other bidders, was signed at Stadler's Bussnang headquarters in Switzerland on November 18.

The trains will be manufactured at Stadler's plant at Siedlce in Poland, with delivery due to start in 2030, followed by entry into service later the same year. They will be maintained by NS subsidiary Nedtrain.

INTERNATIONAL RAILWAY JOURNAL, November 20

SCOTLAND

New Suburban Fleet

British operator ScotRail, which is responsible for running local and regional services throughout Scotland, launched a tender for a fleet of up to 106 new suburban trains on November 5. ScotRail says two-thirds of its trains will need to be replaced within the next 15 years. The tender includes a contract for a base order of 69 trains, with an option for a further 37. In both cases trains are likely to be a mix of EMUs and BEMUs, and the first units are expected to enter service in the 2030s.

The new trains will serve destinations including East Kilbride, Fife, Borders, as well as Glasgow inner suburban routes, including the Argyle Line, which includes services between Glasgow and Motherwell, Larkhall and Lanark, and South Electrics routes, including the Shotts Line.

The tender includes a separate contract for the maintenance and supply of spares for the new trains. This contract would be for a base period of 15 years and could be extended to 35 years. The deadline for submission of tender documents is January 19, 2026. ScotRail says it will then invite applicants to negotiate on the details of the contracts.

A pair of Class 318 EMUs, Nos. 318267+318270 (British Rail Engineering Limited, 1985-86), are seen at Cumbernauld June 15, 2024. Justin Foulger photo via Wikipedia

The Scottish government, which owns ScotRail, has approved the tender process, which is being closely coordinated with British infrastructure manager Network Rail's work to electrify key lines across Scotland. The tender launch follows on from a market engagement exercise which was carried out with potential suppliers of the new suburban trains earlier this year.

INTERNATIONAL RAILWAY JOURNAL, November 6

STOCKHOLM, SWEDEN

New EMUs Ordered

Region Stockholm has awarded a contract to Skoda Group for 16 two-car EMUs with an option for a further 15 trains. The contract, including the option, spare parts, and driver training, is worth in excess of €230 million. The trains will be deployed on the isolated Saltsjobanan commuter line which connects Stockholm Slussen with Nacka, Saltsjobaden and Solsidan and is operated by Greater Stockholm Local Transport (SL).

Rendering of Skoda's EMU for Stockholm's Saltsjobanan commuter line. Skoda Group

Each two-car train will be 36 meters long with capacity for around 250 passengers, including 94 seated. Up to three EMUs can be coupled to form six-car trains during peak periods. The trains will have an environmentally friendly air-conditioning system running on clean propane.

All trucks will be powered on each train. The line is currently being upgraded from 750V dc to 1.5kV dc overhead electrification and the western end of the line from Slussen to Henriksdal is currently closed for reconstruction and is due to reopen in 2028. Skoda Group will deliver the first train in 2029, with entry into service planned for late 2029 or early 2030. Engineers working in Skoda Group's subsidiary in Finland will play a significant role in the development of the trains.
INTERNATIONAL RAILWAY JOURNAL, November 17

SWITZERLAND

New EMUs Ordered

Swiss Federal Railways (SBB) has awarded Siemens a framework contract for up to 200 six-car double-deck EMUs. A base order for 116 trains, worth SFr 2 billion, includes 95 trains to replace first-generation DPZ double-deck EMUs operating Zurich S-Bahn services, which are over 30 years old. A further 21 trains will be deployed in French-speaking Switzerland on the Vaud RER centered on Lausanne and the RE33 Martigny to Annemasse line.

The contract, which was tendered in June 2024, includes an option for a further 84 trains. The 150-meter-long EMUs, which will each seat 540 passengers, will operate Zurich S-Bahn services in multiple during peak periods and will provide 45 more seats and 30% more standing room than the current DPZ fleet. The first new trains are expected to enter service with the timetable change in December 2031 and delivery of all 116 EMUs is expected to take six years.

The trains will be built at Siemens' Krefeld facility in Germany and will be maintained by SBB. The contract includes provision for purchase of spare parts.
INTERNATIONAL RAILWAY JOURNAL, November 7

Rendering of SBB's new double-deck EMUs. Siemens Mobility

VALENCIA, SPAIN

Metro/Light Rail Investments

The Valencia regional government in Spain has announced an €839 million modernization and expansion plan for the Metrovalencia and Tram d'Alacant networks. The investment forms part of Valencia Government Railways' (FGV) 2026-2030 strategic plan and is described as the largest in the company's history.

The plan sets out six key action points:

- Infrastructure renewal, including the renovation of tunnels and level crossings, updated signaling and communications for light rail lines and surface sections of the metro, upgraded electrical systems and expanded maintenance workshops
- Complete work on restoring parts of the network damaged by severe flooding in October 2024, including track, offices and workshops at Valencia Sud
- New rolling stock, comprising 22 new series 4500 Tramlink LRVs from Stadler Rail Valencia, 16 for Metrovalencia and six for Tram d'Alacant
- Stations, passenger facilities and accessibility, including the refurbishment of underground stations on Metrovalencia Lines 1 and 2, a new passenger information system, and work to provide step-free platforms
- Improve service frequency, with shorter routes on Metrovalencia Lines 1, 3 and 9 to improve punctuality and reliability
- Network development: For Metrovalencia, this includes completing a pedestrian tunnel linking Alacant and Xativa stations, double-tracking on Line 3, building Lines 11 and 12 to connect the city center with the seafront, Malilla and La Fe Hospital. In Alacant, new projects include a central interchange station, double-tracking of the Hospital Vila to Benidorm and L'Albir to Altea sections, electrification of the Benidorm to Garganes line, and a new stop at Jesus Pobre–Pedreguer.

INTERNATIONAL RAILWAY JOURNAL, November 10

MetroValencia Flexity Outlook No. 4239 (Bombardier Transportation, 2011) at Alacant Station on March 30, 2025. Yury Maller photo

North American Transit Project Openings in 2025

By Randy Glucksman (ERA #3213)

Nine projects were proposed for completion this year, including two holdovers from previous years. Two were added, four projects were moved to 2025, and for three projects, there are no proposed opening dates. See the table below.

Date	Agency	City	Type	Line	Details	Notes
April 3	PATCO	Philadelphia, Pa.	HR	PATCO	Franklin Square re-opens (Fifth time)	From 2024
May 10	Sound Transit	Seattle, Wash.	LR	Line 2-East Link LRT Phase II	Redmond Technology to Downtown Redmond 3.4 miles 2 stations	From 2024
June 6	Los Angeles County MTA	Los Angeles, Calif.	LR	K and C Lines	Westchester/Veterans to Aviation/ Century LAX/Metro Transit Center Station Opens 1.2 miles	Added
June 7	Valley Metro Rail	Phoenix, Ariz.	LR	South Central Extension	Downtown Phoenix Hub to Baseline/ Central Ave 4.8 miles 8 stations	From 2024
September 19	Los Angeles County MTA	Los Angeles, Calif.	LR	Line A	APU/Citrus College to Pomona North 9.1 miles 4 stations	-
October 16	Honolulu Authority for Rapid Transportation	Honolulu, Ha.	APM	Skyline Rail Line Phase II	Halawa to Kahauiki 5.2 miles 4 stations	-
October 24	Kansas City Streetcar Authority	Kansas City, Mo.	LR	Main St. Extension (Purple)	Union Station to UKMC 3.5 miles 8 stations	-
November 17	Réseau Express Métropolitain (REM)	Montreal, Que.	LR	REM - Light Rail (Line A4) Deux Montagnes Branch	Central Station to Deux Montagnes 10.5 miles 14 stations	From 2024
December 6	Sound Transit	Seattle, Wash.	LR	Federal Way Link Extension	Angle Lake to Kent/Des Moines 7.8 miles 3 stations	From 2024
December 7	Toronto Transportation Commission	Toronto, Ont.	LR	Line 6-Finch West LRT	Humber College to Finch West 6.83 miles 18 stations	From 2023

Delayed to 2026
Orange County Streetcar
LACMTA D Line
Line 5-Eglinton Crosstown Phase I
West Lake Corridor (NICTD)

Legend			
APM	Automated People Mover	HR	Heavy Rail
CR	Commuter Rail	LR	Light Rail

Paul's ERA Bookshelf

By Paul Grether (ERA #6933) and Subutay Musluoglu (ERA #6474)

Le grand pari du metro — 125 ans d'histoire en 14 lignes by Philippe-Enrico Attal and Julian Pepinster, published by La vie du Rail, Paris, France in 2024, hardcover large-format, 414 pages. French language. Lavishly illustrated with black-and-white and color photographs, diagrams and other ephemera. ISBN 978-2370621047.

Metropolitain — A social and economic history of the Paris Metro by Brian Patton, published by Platform 5, Sheffield, England in 2025, hardcover, 272 pages. English language. Included are lists of station-by-station histories (including abandoned stations), a list of abbreviations and a lengthy bibliography. High-quality black-and-white and color photographs are used throughout with detailed captions. ISBN 978-1915984081.

This month features three "firsts" for this column, multiple books focused on a single topic (the Metro in Paris, France), a non-English language book and the first joint book review.

The Paris Metro is recognized as one of the world's premier urban rail rapid transit systems. First opened on July 19, 1900 as only the fifth subway in the world (New York's was the seventh when it began service four years later), the Metro has grown from a 6.5-mile-long line to a close knitted web of 14 main lines and two short shuttle-like lines with 153 route miles serving 321 stations. Today, it's one of the densest subways in the world, arranged so that in central Paris a user is on average never more than 500 meters away from a station.

Interwoven with a complementary sprawling regional rail system, the Paris Metro lies at the heart of one of the largest metropolitan passenger rail networks on the planet, on par with London and Tokyo.

When one thinks of the Paris Metro, the images that come to mind may be its signature Art Nouveau station entrances, or its rubber-tired trains (though only 5 of its 14 lines are equipped as such). The Metro is one of the most innovative subways around, consistently introducing novel technologies throughout its history, some of which have become common features of many of the world's subways. In recent decades, the Metro pioneered the first use of CBTC in a subway environment, paving the way for similar applications on its older legacy lines, and thus setting the global standard for automated driverless operation. Even the name, Metropolitain — Metro — has become the common term for underground rail rapid transit systems.

For the longest time it was nearly impossible to find a proper English language explainer on the inner workings of the Metro, except for a few multi-page essays imbedded within surveys of world systems, notable examples being *Underground Railways of the World*, O.S. Nock, 1973 and *Labyrinths of Iron - A History of the World's Subways* by Benson Bobrick in 1981.

And despite having been published 55 years ago, the 1970 booklet *On Rails under Paris,* written by B.J. Prigmore and published by the Light Railway Transport League, still serves as a decent introduction to the history, development and operations of the Metro.

The situation improved considerably in 1988 when the noted British transport publisher Capital Transport produced the *Paris Metro Handbook*, written by Brian Hardy. Hardy ably detailed the evolution of the system, line by line, while providing equal treatment to daily operations, station design, rolling stock, power supply, signaling and fare collection. Mr. Hardy revised his handbook in 1993 and again in 1999 on the eve of the Metro's centenary.

Looking east at the La Motte-Picquet—Grenelle station of Line 6 on December 3, 2024. A train of MP 73 stock (Alsthom, 7/1974), set No. 6546, is leaving on its way to Charles de Gaulle/Etoile. This portion of Line 6 opened on April 24, 1906. Paul Grether photo

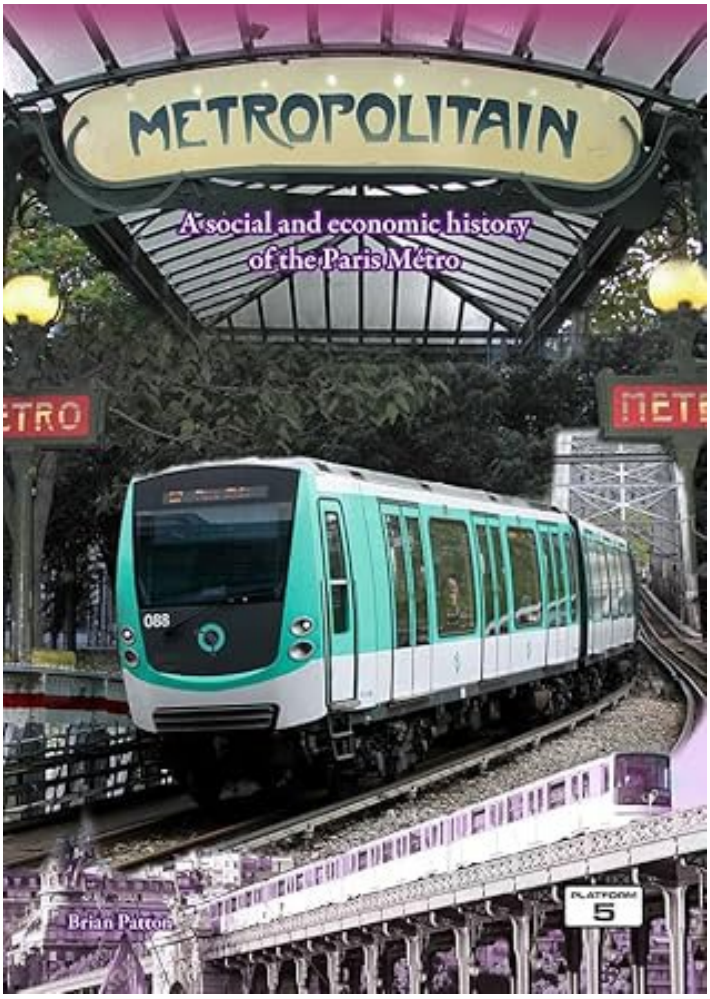
Taken at the same station complex as the photo above, only underground, this is MF 77 No. 145 (Franco-Belge/Alsthom, 7/1981) operating on Line 8 to Creteil - Pointe du Lac on January 20, 2025. This portion of Line 8 opened on July 13, 1913. Jeff Erlitz photo

On the occasion of the Metro's centenary in 2000, Paris Metro operator RATP (Regie Autonome des Transports

Parisiens) had much to celebrate. Two years prior, they opened Line 14, the world's first automated rapid transit line. New rolling stock for both the steel rail and the rubber-tired lines were on the way, and station and infrastructure renewals were taking place across the system. The system was being renewed and expanded for its second century of service.

Various celebratory events were held throughout the year, including the publication of a book, *Un Siecle de Metro en 14 Lignes — De Bienvenue a Meteor,* written by Jean Tricoire, a senior member of the RATP's Heritage Department. Three editions of this French language book were jointly published by RATP and La Vie du Rail in 1999, 2000 and 2004. The title translates to "A Century of the Metro in 14 Lines — From Bienvenue to Meteor," and interestingly, the second part of the title has a double meaning. Bienvenue recalls Fulgence Bienvenue, the acclaimed mining engineer who oversaw the metro's development and early construction, affectionately known as "Le Pere du Metro," the Father of the Metro. Yet, "Bienvenue" is also the French word for "welcome" and in this interpretation, the greeting is meant for Meteor, the working title of the **Met**ro **E**st-**O**uest **R**apide project, which came to be known as Line 14 when it opened on October 15, 1998.

In many ways, the book followed Hardy's approach, but on a bigger scale. A notable feature was the inclusion of full color cutaway illustrations highlighting several of the Metro's most interesting locations, such as major interchange stations and complex track junctions, some of which rival



even those found in New York City.

Now, two new books bring the Metro story forward to the present day. The first, *Le grand pari du metro — 125 ans d'histoire en 14 lignes*, is an updated and refreshed version of the afore described. Published by La Vie du Rail in September 2024, it was produced by photojournalist Phillipe Enrico Attal and noted Metro historian Julian Pepinster, with Jean Tricoire returning as a contributor and consultant. Mr. Pepinster is a recognized authority on all aspects of the Paris Metro who has authored/co-authored several previous books on the system and was the editor of Mark Ovenden's *Paris Metro Style in Map and Station Design*, Capital Transport, 2008, and *Paris Underground-The Maps, Stations, and Design of the Metro*, Penguin Books, 2009. He also happens to be a current RATP employee and is co-founder and current President of the Association d'Exploitation du Materiel Sprague (ADEMAS), a railway enthusiast and preservation group dedicated to the preservation of historic Paris Metro rolling stock and fostering education of Metro history.

Once again, the new book's title has a double meaning, "Le Grand Pari du Metro" could easily be read as the "The Great Parisian Metro" but perhaps more appropriately, it's "The Big Gamble of the Metro" as the French word "pari" translates to a bet or a wager. The second part of the title is an update on the original, "125 years in 14 Lines."

Author Julian Pepinster working on a car restoration at the ADEMAS base at Camp des Matelots in Versailles outside Paris on September 18, 2024. Subutay Musluoglu photo

Sprague driving motor car M.1266 at the ADEMAS facility at Camp des Matelots in Versailles outside Paris on September 18, 2024. No. 1266 was built by Decauville (Corbeil) and delivered in 1931, serving until its retirement on April 16, 1983. Subutay Musluoglu photo

At 414 pages, the book is massive, and follows a similar format to the centenary book, but with much more detail and more lavish photographs, maps and illustrations. It takes a close look at the system's development, starting with initial concepts in the late 19th Century of a rail system purpose-built to serve the needs of inner Paris, which would be separate from the steam-powered main lines which by then had ringed, and somewhat penetrated, the city in the form of the grand iron columned and glass roofed terminals still standing today.

Elevated systems in numerous forms were proposed, running down the center of the city's famed Haussmanian boulevards, and eventually consensus was reached on a primarily underground network of interconnected lines. While the track gauge adhered to the common standard of 1435 mm (4 feet, 8½ inches), an intentional decision was made to go with a slightly reduced loading gauge to ensure the city-owned system would remain separate from the national main line railways.

Similar to what happened in New York, the governing bodies of the city of Paris took the lead in determining where the lines would go and how they were designed, retaining ownership of the physical plant while franchising out the operation and maintenance to two private companies, the Compagnie du Chemin de Fer Metropolitain de Paris (CMP, 1898) and the Societe du Chemin de Fer Electrique Souterrain Nord-Sud de Paris (Nord-Sud, 1904). The two companies merged in 1929/1930 and in 1947 the system came under the control of RATP, set up by the French national government as a "special state enterprise," a status it retains to this day.

Attal and Pepinster's book is divided into four main headings covering 1) the overall history of the system, including its operations during the two world wars and the creation of the RATP; 2) detailed line by line histories; 3) detailed station histories; and 4) the engineering, architectural design, and construction techniques used to build the system, and detailed descriptions of the evolution and technology of the system including rolling stock, power, signals, work equipment, and operations. Even for a non-French speaker (camera smart phone translation apps notwithstanding) the illustrations and context clues make for a compelling monograph.

The book also explores unique aspects of the Metro's history, such as its impact on, and place in, French arts and culture. Lesser known, but no less important, features such as safety and security are also examined. Many of the contemporary photographs are Pepinster's own, and the full color cutaway illustrations which had featured in the centenary book are included here again, though somewhat reduced in scale and number.

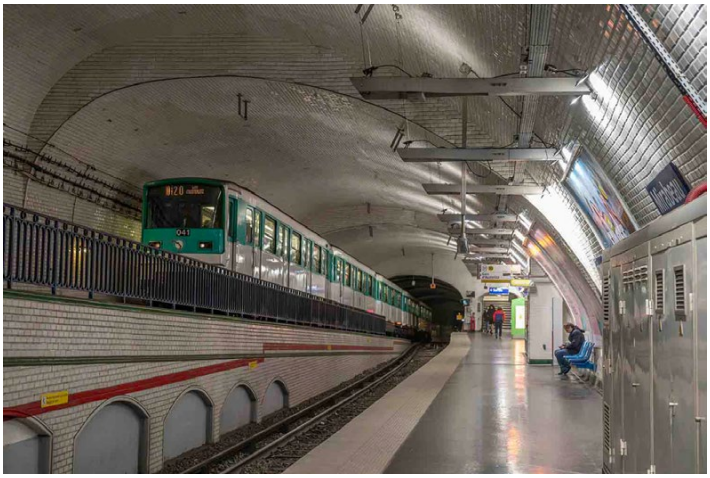
Metropolitain — A Social and Economic History of the Paris Metro was published earlier this year by Platform 5 and written by Brian Patton, who is also no stranger to the topic of Parisian railways. Patton wrote the *Paris RER Handbook*, published by Capital Transport back in 2001, also highly recommended. Though out of print, it can be found on the internet.

Patton's *Metropolitain* is by far the biggest and most comprehensive English language book yet published on the Metro. It is organized into 23 chapters covering a detailed history of the system, including the political and technological context for the design and construction, wartime

operations and later expansion and automation. Also included are detailed line-by-line histories as well as airport and funicular services.

Both books are highly recommended for anyone seeking to learn about one of the world's legacy subway systems.

Links to book information:
Le grand pari du metro — 125 ans d'histoire en 14 lignes:
www.libib.com/u/grether?solo=129857322
Metropolitain — A Social and Economic History of the Paris Metro: www.libib.com/u/grether?solo=150600675
Links to additional books mentioned:
Underground Railways of the World:
www.libib.com/u/grether?solo=111573566
Labyrinths of Iron — A History of the World's Subways:
www.libib.com/u/grether?solo=63786395
On Rails under Paris:
www.libib.com/u/grether?solo =115153057
Paris Metro Handbook:
www.libib.com/u/grether?solo=113657078



MF 67 D No. 041 (Brissonneau et Lotz, 1969) is westbound and passing through the very unusual one-way station at Mirabeau on Line 10 on January 20, 2025. The train is destined for Porte d'Auteuil. This section of Line 10 opened on September 30, 1913 as Line 8. Jeff Erlitz photo

Two trains of MF67 stock are seen at Line 10's underground depot at Auteuil on September 20, 2024. On the left is MF67CX trainset No. 125 (Alsthom-Groupe Brissonneau/SFB-Societe Franco Belge, 1974), composed of S.9034-N.11223-NA.12125-N.11071-S.9033. On the right is MF67C2 trainset No. 092 (Brissonneau et Lotz, 1971), composed of S.9158-N.11175-NA.12092-N.11187-S.9017. Subutay Musluoglu photo

A Dive in the ERA Archive

An occasional feature of the Bulletin. The objective is to publish several times a year, as interesting content is made available and digitized.
By Paul Grether (ERA #6933)

This month's feature comes from the same unmarked box from the previous column. A little background on some interesting pictures:

Dual-gauge electric railroading. No. 1290 is an H-4 class car originally built as an H-2 class by St. Louis Car Company in 1923 as order No. 1297 for 50 cars (out of a total H class fleet of 250 cars) for Los Angeles Railways. Originally equipped to operate multiple in two-car trains, this ended by 1930 because of ridership decline. In 1934 the car was converted into H-4 class by implementing a redesign for one-man operation. Experience with prior orders of the H class cars resulted in cars No. 1276-1300 coming from the factory as four-motor cars, the two-motor configuration was determined as under-powered for multiple operation, and the entire H class was retrofitted.

No. 1290 would operate for Los Angeles Railways, successor Los Angeles Transit Lines (National City Lines) and would be briefly owned by Metro, the Los Angeles Metropolitan Transit Authority that took over in March 1958. Car No. 1290 is shown on a fantrip on March 3, 1957 in Los Angeles with "railroad" gauge ex-Pacific Electric (now Metro) "blimp" car No. 315 pulling up behind. Per information on the back of the photo, car No. 315 is in service to San Pedro and 1290 is signed up as the 7 but operating on the S line. On this date these were the only two blocks of dual-gauge tracks remaining. Note the two car-stop signs, one for "Interurban" and the other for "Car Stop." The location is San Pedro Street at 8th. Photo by Norman K. Johnson, ERA Collection.

More information can be found in *The Yellow Cars of Los Angeles: A Roster of Streetcars of Los Angeles Railway and Successors from the 1890s to 1963* by Jim Walker - www.libib.com/u/grether?solo=89897022

The next photo shows an electric locomotive. The Niagara Junction Railway was a large electric terminal switching operation originally developed by the Niagara Falls Power Company to serve various industries that located in the area to take advantage of cheap hydro-electric power.

Locomotive No. 11 was originally built by Baldwin-Westinghouse as a B-1 class locomotive and shipped with a second unit to the Chicago, South Shore and South Bend Railroad in May of 1927 as locomotive No. 1006/Serial No. 57716. Interestingly, in early 1929 the CSS&SB RR ordered kits from Westinghouse to convert the two locomotives to dual-power so that they could operate on both the 1.5kV DC and the 600V DC of the Chicago, North Shore & Milwaukee interurban, another Insull property, in case of locomotive shortages. No record exists of No. 1006, nor identical No. 1005, ever operating on the North Shore.

In December 1941 both locomotives were sold to the Niagara Junction Railway, with No. 1005 becoming No. 10 and No. 1006 becoming No. 11. No. 10 was scrapped in the 1960s, but No. 11, pictured here, was sold as a parts donor to the Cornwall Street Railway in Ontario, which helped to keep electric freight operating there until the Canadian National Railway takeover in 1971.

The back of the photo is marked "Gift of David V. Williams, III, Richmond, KY," but the photographer and date are unknown, ERA Collection.

More information can be found in:

Interurban Electric Locomotives from Baldwin-Westinghouse by Joseph A. Strapac: www.libib.com/u/rether?solo=63147078

When the Steam Railroads Electrified by William D. Middleton: www.libib.com/u/grether?solo=62028757

Electric Locomotive Rosters by Robert J. Wayner: www.libib.com/u/grether?solo=69143965

Do you have additional information about these pictures from the ERA collection? Email grether@mindspring.com and perhaps more information can be shared in a future *Bulletin*.

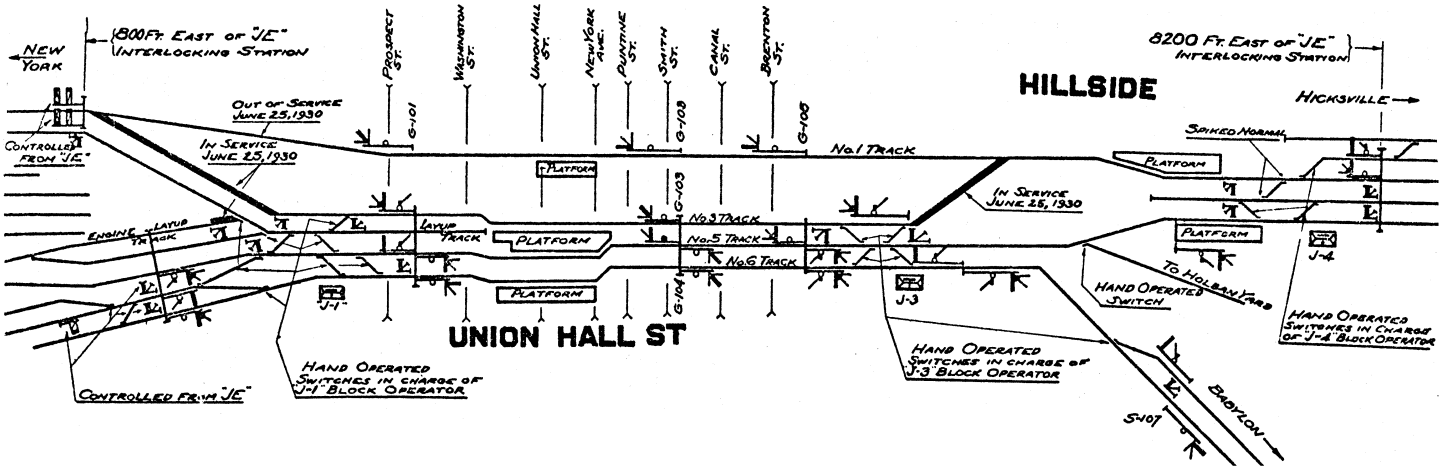
From the Camera of Henry Wilhelm (ERA #1968)

Henry returned to Jamaica on July 18, 1930, to document the progress being made on the Long Island Rail Road's Jamaica East grade crossing elimination project. (See the March 2025 *ERA Bulletin*, page 17, for Henry's first visit to Jamaica on April 1, 1930.) The railroad had begun operating on just the northernmost three tracks in the open cut east of Jamaica Station on December 8, 1929. This freed up the space on the south side of the right-of-way to enable the building up of the new embankment. This was also the date that the three temporary block stations, J-1, J-2 and J-3, were placed into service.

On June 21, 1930, the railroad had completed enough of the new embankment on the south side of the right-of-way to enable them to shift the operation from the open cut to up on the embankment. The three temporary block stations were also relocated up on the embankment. In addition, Tower RJ at Hillside was closed and a fourth temporary block station, J-4, was placed into service. Tower RJ had controlled the junction of the Main Line and Montauk Branch. J-4 controlled the switches (all hand-operated) and signals just to the east of Hillside Station, where the Main Line now necked down from four to two tracks.

The negatives for these images are in the collection of the Western Connecticut Chapter-National Railway Historical Society, whom we thank for their use.

(Below) The employee timetable general order diagram from June 21, 1930 showing the new arrangement of tracks on the embankment on the south side of the right-of-way.



View west from the rear platform of an eastbound train going over the new 158th Street undergrade bridge. J-1 Block Station is on the left, just beyond the bridge. The area to the right is where the tracks led into the open cut.

Looking east at 150th Street at the signal bridge that held the home signals controlled from J-1 Block Station, which can be seen slightly left of center, right above the tracks.

Slightly east of the above photo, Henry is standing on the Engline Layup Track, with dwarf signal 06R, controlled from J-1 Block Station, right in front of him. The block station can be seen directly above that signal. The little structure above and slightly to the right of the signal is probably an additional switchman's shanty. Originally, J-1 Block Station was located on the original at-surface grade on the north side of the right-of-way. It was relocated onto the embankment on the south side of the right-of-way when the new tracks in the distance were placed into service. J-1 Block Station had a Union Switch & Signal Style TC (table-top) interlocking machine.

Another view from the back platform of a train looking west, east of Union Hall Street Station. This is the new bridge over 168th Street and Signal Bridge G103/104 is just beyond. Note that the supports for the signal bridge are on the embankment on the left (south side) and on the original, surface grade on the right (north side).

(Above) West of Hillside Station looking east. Henry is standing on Track 5 and J-3 Block Station is at the right (at the botom of the high tension support structure). On the left are the footings for the new viaduct that will take the Montauk Branch over the eastbound Main Line tracks. In the distance is the pedestrian overpass at Hillside. To its right is a portion of the new Montauk Branch viaduct. (Below) Henry is on the eastbound platform at Hillside and we see a westbound MU train approaching. Just beyond this platform is J-4 Block Station and Holban Yard (for freight) is on the right.

Building the New York Subway System, A Photographic Journey

Construction Route No. 18 — Part 5

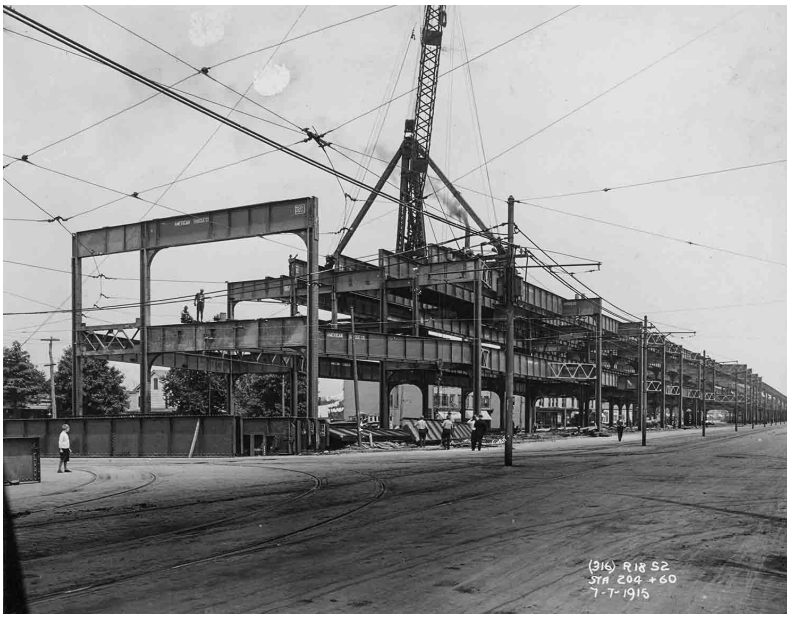
By Jeff Erlitz (ERA #3997)

This month, we continue with Subway Construction Route No. 18, the IRT White Plains Road Line. All of these scenes are from Section 2, north of Burke Avenue.

The photographs on this page are in the William D. Hassler collection, New-York Historical Society. The photographs on page 25 are in the Subway Construction Photographs Collection of the New York Transit Museum via the New-York Historical Society.

Both photographs on this page are of the terminal at East 241st Street on May 12, 1915. This photo is looking north from the intersection of White Plains Road and Baychester Avenue (now East 241st Street). Union Railway single-truck 10-bench open car No. 227 (J. G. Brill, 1896) is the trolley closer to the photographer. They are both likely operating on Line W-Webster Avenue and White Plains Road.

Looking south on White Plains Road at the end of the elevated structure, a little north of East 241st Street. At this time, East 241st Street was known as Baychester Avenue east of White Plains Road (to the left in this photo).



Looking northwest at White Plains Road and East Gun Hill Road on July 7, 1915. The Webster Avenue extension of the Third Avenue Elevated will occupy the lower level while the White Plains Road Line will be on the upper.

Looking north from the south end of the southbound platform of 219th Street Station on December 6, 1915. Note the lack of any kind of safety railing at the edge of the platform. Both of the buildings to the left are still standing on the corner of White Plains Road and East 219th Street. Subway service was extended from East 177th Street-West Farms Square to this point on March 3, 1917.

Looking east across White Plains Road, between East 227th and East 228th Streets on February 17, 1915. The taller building in the background on the right still stands, at 720 East 227th Street. The east side of White Plains Road now has one- and two-story storefronts with no apartments above them. The shed in the center of this rather rural-looking scene belongs to a plumber, or plumbing supply, that offered "Sanitary Plumbing" and gas fixtures.

Travels with Jack May

Scotland-Ireland 2018 — Part 2A

By Jack May (ERA #2275, Photographs by the author)

I returned to Edinburgh during the summer of 2023 to take in the sizeable expansion to the city's tramway that had just opened. After much dispute regarding the scope and exact route of the line's extension, operations to Newhaven via Leith were inaugurated on June 7, 2023, increasing the undertaking's length from 8.4 miles to 11.5.

Unlike the original line, the route to the north and east lies mainly in an urban landscape, as opposed to primarily stretching through green suburbs on private rights-of-way. Both Leith and Newhaven are ports for Edinburgh on the Firth of Forth, an estuary which empties into the North Sea, and whose glory days were 100 to 200 years ago, when shipbuilding and other industries brought prosperity to the area. These districts are being revitalized with Leith now serving cruise liners, and becoming the home of the late Queen Elizabeth II's elegant Royal Yacht Britannia, which has been converted to a museum. With the arrival of these tourist attractions the area has become an attractive venue for pubs and restaurants.

As mentioned in Part 1 of this series, Edinburgh Trams, the official name of the light rail system, was opened in 2014 (see http://www.urbanrail.net/eu/uk/edin/edinburgh.htm for a map). Its original terminal, York Place, was replaced by Picardy Place when the line was expanded. It now takes about 55 minutes to traverse the entire route, with the original portion and extension roughly consuming the same amount of time. The line continues to be served by a fleet of 27 double-ended 100% low-floor LRVs. Built by CAF, the Urbos 3s are 140 feet long, seat 78 passengers and are capable of speeds up to 43 mph. The model is quite popular overseas, and versions are represented in the U.S. cities of Cincinnati and Kansas City.

Proof of payment remains in use and a valid fare must be displayed on request by inspectors, or the passenger must pay the "On Board" fare of £10. Tickets are available from vending machines, which are located at every stop. Adult, child and family tickets and day passes are sold (but there are no senior fares). We each bought day passes.

On this trip my traveling companion, Karl-Heinz Roeber, and I arrived aboard a TransPennine Express EMU at Edinburgh's main station, Waverley, which is just a short walk away from the Princes Street stop of the tram line. We first rode out to the new end of the line at Newhaven, and then worked our way back to the city center by tram and foot, taking photos along the way.

After our inspection of the new extension, we still had enough time to ride the original line, but did not go to the Airport because of the extra £7 we would have been obliged to pay for riding one stop beyond Ingliston Park and Ride. After a few photos here and there we had to say a final goodbye to Edinburgh and return to our hotel in Newcastle upon Tyne.

We will return to the narrative for our 2018 Scotland trip report in next month's chapter.

Open-access regional carrier TransPennine Class 802 AT300 EMUs are built by Hitachi Rail, successor to Ansaldo Breda. This view, upon our arrival at Waverley Station from Newcastle upon Tyne on July 25, 2023, may explain the origin of the expression "mind the gap."

A telephoto view from the Newhaven terminal of the line. The tram on the right finished its run here, while the one at left is just pulling out for its journey to the airport. There is a crossover between the photographer and the point shown in this view. Note that traffic here in the British Isles runs left handed. The tall cranes in the left background bear witness to the redevelopment of Leith into a residential and entertainment area as its industrial base declined. A huge parking structure in front of them serves Edinburgh's Ocean Terminal, home to the Royal Yacht Brittania, a now-tourist attraction which was decommissioned in 1997 during the reign of Queen Elizabeth II, and the city's largest shopping center, containing shops, pubs and restaurants galore. The buildings stretching out on the right side of the photo are new residential apartments and condominiums.

The Newhaven terminal has side platforms, possibly indicating a future extension of the line. If that were to happen it could follow an original plan and loop back to the city center by continuing west parallel to the Firth waterfront and then running south to Haymarket. But that concept has been replaced by a plan with a new tram line running just north-south from Granton, well east of Newhaven.

Looking toward the city center from the Foot-of-the-Walk stop at the entrance to the Leith district. Leith Walk becomes Constitution Street at this point.

(Above and below) These two photos were taken at slightly different angles only a few yards apart looking toward Newhaven between the Port of Leigh and Ocean Terminal stops along Ocean Drive. The five-star Fingal Hotel is prominent in the upper view. Built in Glasgow and registered in Leith, the Fingal was constructed in 1963 to ferry lighthouse keepers along the shores of the west coast and north of Scotland. It languished after its retirement in 2000 until purchased by the Royal Yacht Britannia Trust in 2014. It took five years to rebuild the craft into its current role as a floating hotel. The lower view shows one of many former busy waterways, like the Albert Dock Basin (where the Fingal lies) and one called the Water of Leith, which the now-pedestrianized Victoria Swing Bridge (at left) crosses.

The beginning of narrow Constitution Street was converted to pedestrian- and tram-only use for a short distance. Beyond the curve it's straight ahead to Leith with plenty of room for both autos and trams. Note the simple stop where passengers board and alight from trams, the countdown clock in the background and especially, that some LRVs are fully wrapped in more than just a version of the official livery.

An inbound train from the airport about to make the sweeping curve into the Ingliston stop. Note the fact that Edinburgh was suffering a drought during the summer of 2023.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